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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,794	11/10/2000	Wen-Shi Huang	39088/205	4359

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EXAMINER

TAMAI, KARL I

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 06/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/709,794

Applicant(s)

HUANG ET AL.

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7,12,13 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,12,13 and 16-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Drawings***

1. The objection to the drawings under 37 CFR 1.83(a) is withdrawn.

***Specification***

2. The new title "Bearing Assembly For A Shaft Having Repulsive Magnetic Bearing Rings" has been entered into the file wrapper. The requirement for a new title is withdrawn.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The specification does not support an repulsive magnetic bearing having axially aligned rings with opposite polar dispositions because opposite polar dispositions inherently provide attractive magnetic bearings.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The rejection of Claims 1, 12, and 13 under 35 U.S.C. 102(b) over Hidehiko (JP 55-112419) is withdrawn, and the 35 USC 103 rejections that depend therefrom.

7. The rejection of Claims 1, 12, and 13 under 35 U.S.C. 102(b) over Weilbach et al. (US 5,019,738) is withdrawn, and the 35 USC 103 rejections that depend therefrom.

8. The rejection of Claims 1, 12, and 13 under 35 U.S.C. 102(e) over Huang et al. (US 6,265,798) is withdrawn, and the 35 USC 103 rejections that depend therefrom.

9. Claims 1, 12, 13, 21, 22, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokono (JP 62-095,952). Yokono teaches radial and magnetic repulsive bearings 8 and a plastic ring 10 connected to shaft 5 and base 6. It is inherent that the plastic ring connected to the rotor and stator is a bearing. The bearings on each end acting as an upper and lower bearing respectively. Each bearing being symmetrical, with radially aligned bearings and axially aligned bearings. The recitation of claim 13 has not been given patentable weight because it is a merely an description of the intended use and does not provide additional structural limitations.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokono (JP 62-095,952), in further view of Nair (US 4,367,413). Yokono teaches every aspect of the invention except the base being a stator of a motor. Nair teaches that a turbine generator can operate as a pump/motor. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the bearing Yokono with the base being a stator of a motor because Nair teaches the turbine generator can operate as a pump/motor.

12. Claims 16-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wampler (US 5,840,070) and Kletschka (US 5,195,877). Wampler teaches axially aligned magnetic bearings (figure 8a) and roller bearing 48 to support the rotating shaft. Wampler teaches lower bearings with the first and third magnets (north and south poles of magnet 34) are connected to the shaft, while the second magnet 31 is connected to the base. Wampler teaches every aspect of the invention except the magnets being rings. Kletschka teaches that repulsive ring magnets are used to provide axial and radial support to a rotor. It would have been obvious to a person of ordinary skill in the

art at the time of the invention to construct the bearing of Wampler with ring magnets of Kletschka to provide high efficiency in the magnetic bearing.

13. Claims 4-7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokono (JP 62-095,952) in further view of Imlach (US 5,894,181). Yokono teaches every aspect of the invention except the first-third magnets being ring magnets. Yokono teaches the inner and outer radial magnets are single magnets, which inherently teaches they are rings, but does not teach the third magnet being a ring. Imlach teaches all three magnets are rings to support a cylindrical shaft. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the bearing Yokono with three ring magnets because Imlach teaches that three ring magnets can be used to support a shaft.

#### ***Response to Arguments***

14. Applicant's arguments filed 4/5/02 have been fully considered but they moot in view of the new grounds of rejection. The Applicant's claims continue to be overly broad necessitating the new ground of rejection.

#### ***Conclusion***

15. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai  
PRIMARY PATENT EXAMINER  
June 25, 2002

KARL TAMAI  
PRIMARY EXAMINER

